UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,623	12/29/2000	Akhilesh Kumar	2207/9860	8608

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EXAMINER
HUYNH, KIM T

ART UNIT	PAPER NUMBER
2112	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/751,623	KUMAR ET AL.
	Examiner	Art Unit
	Kim T. Huynh	2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _01 March 2005_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-24_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _02 January 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 20050507

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Morrison et al. (Pub. No.: US 2002/0038398) in view of Srangdhar et al. (US

RE38,388)

As per claims 1,10, 19 Morrison discloses a method for executing a locked bus

transaction in a multi-node system, comprising:

- initiating a locked-bus transaction at a bus agent;[0025],

- transmitting a locked-bus request to a first node controller; and [0025]

     Morrison disclose all the limitations as above except deferring the

locked-bus transaction at the bus agent by said first node controller.

However, Sarangdhar discloses a memory agent or I/O agent in the

computer system may defer a response on any request other than a bus

locked request, another deferred reply transaction, or a cache line write

designated for explicit writeback. (col.11,lines 52-55) Furthermore,

Sarangdhar discloses at col.10, lines 26-38) a transaction can be retried

when the DEFER# signal asserted. A bus agent incapable of supporting a

deferred response will provide a retry response if unable to provide the

required response at the time of the response phase.

It would have been obvious to one having ordinary skills in the art

at the time the invention was made to incorporate Sarangdhar's teaching

into Morrison's system so as to minimize cost for bus agents unable to

accommodate split transactions. (col.2, lines 40-50)

As per claims 2,11, Morrison discloses the method further comprising

transmitting the locked-bus request from the first node controller to a second

node controller(fig.2, 222), [0027], [0023], wherein controller 222 corresponding

to one of nodes 107-109).

As per claims 3,12, Morrison discloses the method further comprising preventing

bus transactions on a bus coupled to said second node controller. [0035],

wherein retries transaction implies preventing if not available)

As per claims 4,13, 20, Morrison discloses the method further comprising

performing the locked-bus transaction by the bus agent over the multi-node

system.[0021]

As per claims 5,14, Morrison discloses the method further comprising asserting a

signal to said bus agent by said first node controller to prevent said bus agent

from initiating a bus transaction.[0028], wherein pending locked transaction

implies preventing)

As per claims 6,15, Morrison discloses the method further comprising the

method further comprising transmitting the locked-bus request from the first node

controller to a second node controller. (fig.2, 222), [0027], [0023], wherein

controller 222 corresponding to one of nodes 107-109)

As per claims 7,16, Morrison discloses the method further comprising preventing

bus transactions on a bus coupled to said second node controller.[0035]

As per claims 8,17, Morrison discloses the method further comprising

deasserting said signal to said bus agent by said first node controller.[0028]

As per claims 9,18, Morrison discloses the method further comprising performing

the locked-bus transaction by the bus agent over the multi-node system.[0021]

As per claim 21, Morrison discloses the method for executing a locked bus

transaction in a multi-node system, comprising:

- initiating a locked-bus transaction at a bus agent for a first I/O node

  including a first I/O device; [0017], [0025], [0027]

- transmitting a locked-bus request to a first node controller; and

  [0025],[0027]

     Morrison disclose all the limitations as above except deferring the

locked-bus transaction at the bus agent by said first node controller.

However, Sarangdhar discloses a memory agent or I/O agent in the

computer system may defer a response on any request other than a bus

locked request, another deferred reply transaction, or a cache line write

designated for explicit writeback. (col.11,lines 52-55) Furthermore,

Sarangdhar discloses at col.10, lines 26-38) a transaction can be retried

when the DEFER# signal asserted. A bus agent incapable of supporting a

deferred response will provide a retry response if unable to provide the

required response at the time of the response phase.

It would have been obvious to one having ordinary skills in the art

at the time the invention was made to incorporate Sarangdhar's teaching

into Morrison's system so as to minimize cost for bus agents unable to

accommodate split transactions. (col.2, lines 40-50)

As per claim 22, Morrison discloses the method further comprising transmitting

the locked-bus request from the first node controller to the first I/O node [0025],

[0027]

As per claim 23, Morrison discloses the method further comprising preventing

transactions at the first I/O node for I/O devices coupled in said first I/O node.

[0035]

As per claim 24, Morrison discloses method further comprising performing the

locked-bus transaction by the bus agent over the multi-node system to the first

I/O device. [0021], [0027]

Response to Amendment

3.   Applicant's amendment filed on 3/1/05 have been fully considered but does not

place the application in condition for allowance.

a. Applicant argues that Sarangdhar fails to disclose at least two recited

elements of independent claim 1: a) a multi-node system deferring a locked bus

transaction at the bus agent and b) the deferral being performed by the said first node

controller. Examiner respectfully disagrees. As Sarangdhar notes at (col.8, lines 1-10,

Examiner further cited for clarification) discloses if the responding agent is not ready to complete the bus transaction, the responding agent latches the first token from the address bus and sends a deferral response(this implies deferring a locked bus transaction at the bus agent and agent is responding by sending a deferral which is equivalent to applicant's claimed as performing at first node controller). Furthermore, Sarangdhar's invention is provide a method and apparatus for plurality of processors(nodes) performing bus transactions on the bus of computer system this is equivalent to multi-node system. Thus, the prior art teaches the invention as claimed and the claims do not distinguish over the prior art as applied.

b. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Examiner relies on Sarangdhar's reference the teaching of deferring the locked-bus transaction at the bus agent by said first node controller for combination. As Sarangdhar notes at (col.10, lines 26-38, discloses a transaction can be retried when the DEFER# signal asserted. Furthermore, Sarangdhar notes at (col.8, lines 1-10, Examiner further cited for clarification) discloses if the responding agent is not ready to complete the bus transaction, the responding agent latches the first token from the address bus and

sends a deferral response. Sarangdhar's purpose is to provide a method and apparatus performing bus transactions on the bus of the multi-processing system. It is clear that Sarangdhar is analogous art and therefore properly combinable for the purpose stated in the rejection of record.

Conclusion

4.   THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5.   *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571)272-3635 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 9.00AM- 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached at (571)272-3632 or via e-mail addressed to [mark.Rinehart@uspto.gov].*

The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications. Any inquiry of a general

nature or relating to the status of this application or proceeding should be directed to the receptionist

whose telephone number is (571)272-2100.

Kim Huynh

May 11, 2005

TIM VO
PRIMARY EXAMINER